

Phase Modulator (MD1100)

for phase modulation at 10 GHz

FIBERPRO's Phase Modulator, MD1100 is titanium diffused and LiNbO₃ Z-cut processed. MD1100 provides chirp control in high-speed data communications. It is available for coherent communications, sensing, and data encryption applications.

MD

Key Features

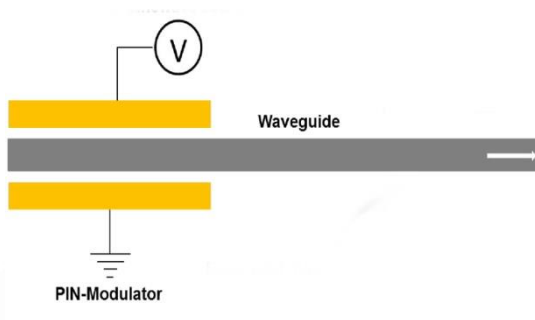
- Low Insertion Loss
- C and L Bands
- High Bandwidth
- Compact Dimension (W x L x H)
 - ✓ 60 mm x 12.5 mm x 5.7 mm

Applications

- Side bands generation
- Interferometric sensing
- Frequency shifting / broadening
- Quantum key distribution
- High data rate telecommunications

Options

- Optical Insertion Loss
 - ✓ Normal: 3.5dB
 - ✓ Premium: 2.0dB
- Fiber
 - ✓ SM fiber , PM fiber
- Connector: FC type, SC type



Key Performance

Parameter	MD1100-10	MD1100-10(P)
Operating Wavelength		
Electro-optical Bandwidth	10 GHz	10 GHz
V_{π} RF @ 50 kHz	6 V	6 V
Insertion Loss	3.5 dB	2.0 dB

Electrical Features

Parameter	Symbol	Unit	Min.	Typ.	Max.
Electro-optic Bandwidth	S21	GHz	10	12	-
Ripple S21	$\Delta S21$	dB		0.5	1
V_{π} RF @50kHz	$V_{\pi RF50kHz}$	V		4	5.2
V_{π} RF @ 10GHz	$V_{\pi RF50kHz}$	V		6	7

Optical Features

Parameter	Unit	Min.	Typ.	Max.
Crystal	-	LN Z-cut Y-Prop.		
Waveguide Process	-	Ti diffusion		
Operating Wavelength	nm	1550 +/- 30		
Insertion Loss 1)	dB	2.0	2.5	3.5
Optical Return Loss	dB	-40	-45	

1) Without Connector

Ordering Code

MD1100-(1)-(2)-(3)

1. IL grade: 3.5dB => N(Normal), 2.0dB=> P(Premium)

2. Fiber: SMF => SF, PMF => PF

3. Connector: FC/APC => FA, FC/PC=> FP, SC/APC => SA, SC/PC => SP